Table A.2.5. North Field SWMU 7 Summary of Boring Log and Analytical Data

Boring/ Date/ Report	Total Depth of Boring	Depth to Water[1]	Lithologic Description[2] (Observation Notes)	Maximum PID Response, ppm_v (Depth)	Sample Type[3]	Sample ID (Depth)	Analyses[4]	COC Concentrations Greater Than Delineation Criteria
S1387 1/17/03 Full RFI-2nd Iteration SWMU 7	8	2	Fill: 0-7 (catalyst beads at 1-7; 2" tar layer, petroleum odor, sludge at 6-7) Peat: 7-8	24 (6)	P, S, F	S1387D1 (6-6.5)	Pb, TOL	Lead: 554 mg/kg TOL: 22.8 mg/kg
S1386 1/17/03 Full RFI-2nd Iteration SWMU 7	12	3.8	Fill: 0-8 (catalyst beads at 0-8; slag at 7-8) Clay: 8-9.5 Peat: 9.5-12	34 (2)	O, U, F	S1386B1 (2-2.5)	Pb, TOL	None
S1385 1/17/03 Full RFI-2nd Iteration SWMU 7	8	3	Fill: 0-8.5 (catalyst beads) Clay: 8.5-9	0.1 (3)	P, S, F	S1385D2 (6.5-7)	Pb, TOL	None
S0832 8/14/02 Full RFI SWMU 7	16	6	Fill: 0-10: (catalyst beads at 2-9; possible sludge at 9.5-10) Clay/Peat: 10-16	104 (9.5-10)	P, U, F	S0832A4 (1.5-2)	Pb, TOL	None
					P, S, F	S0832D3 (7-7.5)	Pb, TOL, SPLP Pb, Phys. Char.	Lead: 419 mg/kg
					P, S, N	S0832G2 (12.5-13)	Pb, TOL	None
S0831 8/14/02 Full RFI SWMU 7	12	6.3	Fill: 0-9: (catalyst beads at 0.5-2 and 4-7; LNAPL Film at 6.5-7 and 8-9 (possibly sludge at 7-8) Peat/Clay: 9-12	22 (6.5-7)	P, U, F	S0831A4 (1.5-2)	Pb, TOL	None
					P, S, F	S0831D3 (7-7.5)	Pb, TOL	Lead: 635 mg/kg TOL: 96.9 mg/kg
					P, S, N	S0831F2 (10.5-11)	Pb, TOL	None
S0808/ MW127 7/25/02 Full RFI SWMU 7	12	5	Fill: 0-5: (catalyst beads at 2-5) Clay: 5-12	0.2 (10-10.5)	P, U, F	S0808A3 (1-1.5)	V, S, M	Aluminum: 95000 mg/kg Copper: 698 mg/kg Nickel: 340 mg/kg Vanadium: 2610 mg/kg

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					P, U, F	S0808B1 (2-2.5)	V, S, M, SPLP metals	Aluminum: 97300 mg/kg Copper: 2250 mg/kg Iron: 44800 mg/kg Lead: 1640 mg/kg Nickel: 1110 mg/kg Vanadium: 1360 mg/kg Zinc: 6320 mg/kg
					P,S, N	S0808E1 (8-8.5)	V, S, M	Iron: 40100 mg/kg
					P, S, N	S0808 (8-10)	Phys. Char.	
					Water	MW127 11/26/03	V, S, M, water quality	None
SB0036 10/12/95 1st Soils SWMU 7	10	7.5	Fill: 0-9.8: (catalyst beads at 0.2-8.4; trace petroleum odor at 5-6 and 7.5-10; black staining at 5.9-6) Meadow mat: 9.8-10 (petroleum odor, gray staining)	1,645 (8-10)	P, S, F	SB0036SE (8-10)	V. S, M, TEL	None
SB0035 10/11/95 1st Soils SWMU 7	10	6	Fill: 0-9.5: (catalyst beads at 0-11; trace petroleum odor at 4-6; petroleum odor, black staining at 8.5-9.5) Meadow mat: 9.5-10 (petroleum odor, trace black staining)	39 (8-10)	P, S, F	SB0035SE (8-10)	V, S, Pb, TEL	Benzenethiol: 4.4 mg/kg Benzo(a)anthracene: 2.6 mg/kg **Benzo(a)pyrene: 1.5 mg/kg** Benzo(b)fluoranthene: 3.4 mg/kg Dibenzo(a,h)anthracene: 0.79 mg/kg TEL: 14.3 mg/kg
U007015 10/12/95 1st Soils SWMU 7	10	6	Fill: 0-9.1: (catalyst beads1.2-8.3; black staining at 7.5-9.1; sheen at 7.4-8) Meadow Mat: 9.1-10 (petroleum odor and staining)	71 (6-8)	None			
U007014 10/12/95 1st Soils SWMU 7	9.5	6	Fill: 0-9.5: (catalyst beads at 1.9-9; black staining at 6-10; petroleum odor at 6.5-10; sheen at 7.5-8)	873 (6-8)	None			

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U007013 10/12/95 1st Soils SWMU 7	12	7.5	Fill: 0-12: (petroleum odor at 2.5-10; petroleum saturated at 4.5-8 and 10-11.4; black staining at 6-7.2 and 10-12) Clay (trace meadow mat): 11.4-12 (black stained, petroleum odor)	146 (4-6)	None			
U007012 10/12/95 1st Soils SWMU 7	10	7.5	Fill: 0-8.8: (catalyst beads at 1-8.8; petroleum odor at 6.5-10; black staining at 6.5-7.2 Silt (trace peat): 8.8-10 (petroleum odor)	90 (6-8)	None			
U007011 10/12/95 1st Soils SWMU 7	10	6.7	Fill: 0-9.8: (catalyst beads from 0-8.5; petroleum odor at 1.8-2; 4.7-5.7; 6-9.8; heavy black staining at 7.6-8) Meadow mat: 9.8-10 (trace black staining)	16 (4-6)	None			
U007008 10/12/95 1st Soils SWMU 7	12	7.5	Fill: 0-11.8: (catalyst beads at 0.2-11.1; petroleum odor at 9-10; trace petroleum odor, trace black staining at 11.1-11.8) Meadow mat: 11.8-12 (trace petroleum odor, trace black staining)	0	None			
U007006 10/11/95 1st Soils SWMU 7	8	6	Fill: 0-7.7: (catalyst beads at 1-6.7; petroleum odor at 6.7-7) Peat: 7.7-8	0	None			
U007005 10/11/95 1st Soils SWMU 7	10	6	Fill: 0-9.8: (catalyst beads at 0.5-9; petroleum odor, black staining at 7.5-8; petroleum odor at 8-10) Meadow Mat: 9.8-10 9 (petroleum odor)	4 (8-10)	None			

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Boring/ Date/ Report	Total Depth of Boring	Depth to Water[1]	Lithologic Description[2] (Observation Notes)	Maximum PID Response, ppm_v (Depth)	Sample Type[3]	Sample ID (Depth)	Analyses[4]	COC Concentrations Greater Than Delineation Criteria
U007004 10/11/95 1st Soils	7.5	5.5	Fill: 0-7.5: (catalyst beads at 1-4; petroleum odor and black staining at 2-4; refusal at 7.5	0	None			
U007002 10/11/95 1st Soils SWMU 7	6	4.5	Fill: 0-6: (catalyst beads 1-4.6; petroleum odor 4.6-6)	2 (4-6)	None			
U007001 10/11/95 1st Soils SWMU 7	8	4.5	Fill: 0-7.8: (catalyst beads at 1-8.5; petroleum odor, black staining at 2-4; petroleum odor at 6-10) Meadow Mat: 7.8-8 (petroleum odor)	2 (6-8)	None			
H0191 1/14/99 1st Groundwater Addendum SWMU 7	10	6	Fill: 0-9.5: (catalyst beads at 0-6; strong hydrocarbon odor at 4-6 and 8-10; black staining at 5-6 and 8-10 Clay: 9.5-10	27.2 (5-6)	Water	H0191	BTEX, M	Lead: 133 ug/l
H0190 1/13/99 1st Groundwater Addendum SWMU 7	10	5	Fill: 0-9.5: (catalyst beads: 0-8; black stained, hydrocarbon odor at 2-4; slight hydrocarbon odor at 5.7-6; LNAPL on wall of spoon and throughout at 8-10; strong hydrocarbon odor at 8-9.5) Meadow mat: 9.5-10 (strong hydrocarbon odor)	239 (8-9)	Water	H0190	M	None

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Boring/ Date/ Report	Total Depth of Boring	Depth to Water[1]	Lithologic Description[2] (Observation Notes)	Maximum PID Response, ppm_v (Depth)	Sample Type[3]	Sample ID (Depth)	Analyses[4]	COC Concentrations Greater Than Delineation Criteria
HP0086 8/21/97 SWMU 7	10	6	See SB0036	5	Water	HP0086A	V, S, M	**Benzene: 2 ug/l** **Benzo(a)pyrene: 4 ug/L** Chrysene: 10 ug/L Arsenic: 587 ug/l Barium: 4650 ug/l Cadmium: 51.6 ug/l Chromium: 1470 ug/l Lead: 96500 ug/l Mercury: 63.5 ug/l Nickel: 5390 ug/l Selenium: 128 ug/l Vanadium: 32400 ug/l
HP0085 8/21/97 1st Groundwater SWMU 7	10	6	See SB0035	0	Water	HP0085A	V, S, M	Arsenic: 86.1 ug/l Barium: 261ug/l Chromium: 175 ug/l Lead: 229 ug/l Mercury: 3.73 ug/l Nickel: 605 ug/l Vanadium: 7480 ug/l
H0442 10/11/99 2nd OWSS NF6	12	4	Fill: 0-7 (Catalyst beads at 1-7) Clay: 7-12	0	Water	H0442	V, S, M	Arsenic: 14.5 ug/L Lead: 466 ug/L Vanadium: 101 ug/L
H0334 8/24/99 2nd OWSS (NF6)	12	3	Fill: 0-7 Clay: 7-12	3.2 (8-9)	Water	H0334	V, S, M	None
NF6TP20 10/23/01 LNAPL Investigation (NF6)	12	8	Fill: 0-10: (catalyst beads at 1-8) Clay: 10-12	2 (9.5-10)	None			
NF6TP15 8/8/00 LNAPL Investigation (NF6)	8	3	Fill: 0-8: (catalyst beads at 3-8)	0	None			

NOTES:

Benzene and benzo(a)pyrene are highlighted in bold because they are indicator constituents of concern (COCs)

Shaded rows indicate samples collected from nearby SWMUs/AOCs

ppm_v = parts per million (volume basis)

All depths referenced on this summary table are in feet below the ground surface.

PID = Photoionization detector.

ID = Identifier.

mg/kg = milligrams per kilogram (equivalent to parts per million).

µg/L = micrograms per liter (equivalent to parts per million).

[1]Depth to water as observed during borehole advancement.

[2]"Fill" encountered within the completed borings was characteristically described as an asphalt layer (typical) underlain by a heterogeneous gravel to clay mixture of unconsolidated materials, ranging in color from tan to gray with occasional construction debris (e.g., brick) present. In some locations, the fill material is further characterized by containing a slag or beaded material, in which case it is noted within the table. Also noted on the table are any other olfactory or visual observations that indicate potential petroleum-type impacts within the fill unit were observed.

[3]P – property boundary, O – on-site, U – unsaturated, S – saturated, F – fill, N – native. "None" indicates that no sample was collected.

[4]V – VOCs, S – SVOCs, M – metals, Pb – lead, TOL – total organic lead, TEL – tetraethyl lead, TPH – Total Petroleum Hydrocarbons; SPLP -- Synthetic Precipitation Leaching Procedure; -Phys. Char. -- physical characteristics.